

Application No.: 10/725231

Case No.: 58278US004

REMARKS

Favorable reconsideration of this application in the light of the amendments and the following discussion is respectfully requested. Claims 1 to 15 are pending. Claims 8 to 15 have been withdrawn from consideration. Claim 1 has been amended.

Claim Rejections under 35 U.S.C. § 102 and § 103

In the Final Action, claims 1-2 and 6-7 were rejected under 35 U.S.C. § 102(b) as being anticipated by Oxenrider et al. (U.S. Patent No. 5,453,477).

Claims 3-5 were also rejected in the Final Action under 35 USC § 103(a) as being unpatentable over Oxenrider et al. (U.S. Patent No. 5,453,477) in view of McCarthy et al. (U.S. patent No. 5,955,556).

The Examiner acknowledged that applicants have claimed an unexpected way of obtaining an aqueous fluoropolymer dispersion comprising a melt processible fluoropolymer being not self-emulsifying as well as "with or without" a fluorinated surfactant.

As previously discussed in the earlier office action for parent Claim 1, the Examiner again averred that the Oxenrider reference has already disclosed the preparation of stable aqueous fluoropolymer dispersion in the absence of soaps or surfactants due to improved wettability of polymer particles. The Examiner noted that the iron ion in 10-1000ppm is required to be presented in the above-mentioned preparation, the resultant dispersions made by Oxenrider therefore would carry the claimed good conductivity with the presence of water-solvated iron ions.

The Examiner has recognized that Oxenrider reference is directed to aqueous suspension polymerization. However, according to the Examiner, Oxenrider's product is reading on aqueous fluoropolymer dispersion without any use of soap or surfactant. The Examiner indicated that one of the options in Claim 1 is an aqueous fluoropolymer dispersion being free of said fluorinated surfactant, it does not require the type of emulsion polymerization is only applied herein.

With respect to the 103 rejections for Claims 3-5, the Examiner averred that Oxenrider is silent of using non-ionic surfactant for Claim 3 as well as water-soluble salt for Claims 4-5. The Examiner has recognized that McCarthy reference is directed to aqueous emulsion polymerization for self-emulsifying polymers. It was noted by the Examiner that Oxenrider does not rule out the

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preparation of the formation of PCTFE by emulsion polymerization method. With respect to Claim 3, the Examiner stated that McCarthy has disclosed that various types of commercially available surfactants may optionally be pre-charged or batchwise added, and it included non-ionic surfactants.

With respect to Claims 4-5, the Examiner stated that McCarthy et al has disclosed that suitable cationic surfactants such as the salts of fluorinated alkyl quaternary ammonium iodides can be included. The advantage is such addition of conventional above-mentioned surfactants in the preparation of dispersions will effectively improve the stability of aqueous dispersion. According to the Examiner, it does not matter how the aqueous dispersion is prepared from either emulsion or suspension polymerization since high molecular weight polymers can be obtained from both ways.

Applicants Response to the Claim Rejections under 35 U.S.C. § 102 and § 103

Oxenrider

Applicants aver that amended claim 1 is patentable over Oxenrider under 35 USC § 102. Claim 1 has been amended to clearly indicate that the fluoropolymer dispersion is a product of emulsion polymerization. Support for the amendment may be found on page 6, lines 17-20 of the specification. Thus applicants claim an aqueous fluoropolymer dispersion obtained through emulsion polymerization. The dispersion includes a melt-processible fluoropolymer in an amount of at least 25% by weight based on the weight of the aqueous fluoropolymer dispersion and a fluorinated surfactant having a molecular weight of not more than 1000g/mol in an amount of not more than 100ppm based on the weight of fluoropolymer solids or being free of said fluorinated surfactant. The aqueous fluoropolymer dispersion has a conductivity of at least 200 μ S/cm. The conductivity of the dispersion prevents gelation of the aqueous fluoropolymer dispersion.

Oxenrider, in contrast to the inventive aqueous fluoropolymer dispersion discovered by applicants and defined in claim 1, is directed to suspension polymerization. As noted by applicants in response to the previous office action, Oxenrider fails to describe any aqueous emulsion polymerization processes other than the cursory mention of emulsion polymerization as one prior art method of preparing fluoropolymers (see e.g., column 1, lines 43-49). Emulsion polymerization, however, is distinguishable from suspension polymerization.

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According to the MPEP, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." (See MPEP 2131) Since Oxenrider fails to disclose an emulsion polymerization process, such reference would not anticipate the claims of the present invention.

Claims 2 and 6-7 each depend from claim 1 and are patentable over Oxenrider at least on the basis of this dependency from a patentable base claim. Accordingly, withdrawal of the rejection is respectfully requested.

Oxenrider in view of McCarthy

Applicants aver that claims 3-5 are patentable under 35 USC § 103 over Oxenrider in view of McCarthy et al, U.S. Patent No. 5,955,556 (hereinafter "McCarthy"). Applicants assert, for the reasons set forth above, that the noted claims are patentable over Oxenrider. The Examiner previously acknowledged that McCarthy discloses the preparation of a stable aqueous self-dispersible fluorinated copolymer dispersion of up to 48% polymer solids in water in the absence of surfactant due to improved conversion rate of monomer to polymer. Neither reference teaches, suggests or discloses an aqueous fluoropolymer dispersion, having the noted conductivity and obtained through emulsion polymerization, that contains a fluoropolymer that is not self-emulsifying. Further, and with respect to claim 4, neither of the references teach, suggest, or disclose the inclusion of a water soluble inorganic salt or a tetraalkyl ammonium salt in a fluoropolymer dispersion to prevent gelation of the dispersion. Thus even if combined, Oxenrider and McCarthy would not result in the present invention. Applicants respectfully request withdrawal of the rejection of claims 3-5.

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CONCLUSION

In view of the foregoing remarks, favorable reconsideration of the present application and the passing of this case to issue with all claims allowed is courteously solicited.

Should the Examiner wish to discuss any aspect of this application, Applicant's attorney suggests a telephone interview in order to expedite the prosecution of the application.

Respectfully submitted,

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Date

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